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Methodological Assessment of Quasi-Experimental Designs for Evaluating Community Health Centre Systems in Tanzania,

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Abstract

Quasi-experimental designs are widely used in health system evaluations to assess the impact of interventions without random assignment. The review synthesizes existing studies that employed various quasi-experimental designs such as difference-in-differences (DID) and interrupted time series analysis (ITSA), focusing on their methodological strengths and weaknesses. One study used an ITS model with robust standard errors, demonstrating a 15% reduction in healthcare costs over two years. Quasi-experimental designs provide valuable insights into cost-effectiveness but require careful design to minimise bias and improve internal validity. Future research should prioritise transparent reporting of study designs and methods, along with rigorous statistical analyses. Treatment effect was estimated with $text\{logit\}(\pi) = beta0 + \vec{\beta} p X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *Sub-Saharan, Randomization, Blinding, Regression Adjustment, Cost-Effectiveness Analysis, Hierarchical Linear Modelling, Attrition Analysis*

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